E.I. DuPont
Grasselli Plant
Linden/Union County, New Jersey

The E.I. DuPont, Grasselli Plant, Linden, Union County, New Jersey, has been in operation since the 1800's. DuPont took over the plant in 1928 for the purpose of chemical and pigment manufacture. The plant is engaged in the manufacture of sulfuric acids, reagent grade chemicals, agricultural chemicals, aluminum sulfate, ammonium thiosulfate, sodium bisulfite solution, chlorosulfonic acid, dimethyl sulfate, formaldehyde and sulfamic acid.

A medium priority for inspection is given to this site due to the lack of sufficient files and due to the fact that the Eckhardt List states that approximately 7951 tons of chemical waste was disposed of at this site between 1928 and 1979.

Submitted by: Robert Hayton
Environmental Specialist
NJDEP-HSMA
RCRA 3012 Project

NJD002185965

POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 1 - SITE INFORMATION AND ASSESSMENT

EPA

I. IDENTIFICATION

01 STATE	02 SITE NUMBER

II. SITE NAME AND LOCATION

01 SITE NAME (Legal, common, or descriptive name of site)	02 STREET, ROUTE NO., OR SPECIFIC LOCATION IDENTIFIER
E.I. DuPont	South Wood Avenue

03 CITY	04 STATE	05 ZIP CODE	06 COUNTY	07 COUNTY CODE	08 CONG DIST
Linden	NJ	07036	Union		

09 COORDINATES LATITUDE	LONGITUDE	
40°36'53"	74°12'28"	Block 586 Lots 8,9,11

10 DIRECTIONS TO SITE (Starting from nearest public road)
Rt 1 North to Wood Ave..Make right onto Wood Ave. and continue for 1.2 miles. Bear right to Tremley Pt. Rd..Go over turnpike and make left on-to approaching road and continue for .7 mile.DuPont is at end of road.

III. RESPONSIBLE PARTIES

01 OWNER (If known)	02 STREET (Business, mailing, residential)
E.I. DuPont	1007 Market Street

03 CITY	04 STATE	05 ZIP CODE	06 TELEPHONE NUMBER
Wilmington	DEL	19898	( )

07 OPERATOR (If known and different from owner)	08 STREET (Business, mailing, residential)
Robert Blair, Vice President	South Wood Avenue

09 CITY	10 STATE	11 ZIP CODE	12 TELEPHONE NUMBER
Linden	NJ	07036	(201 862-1500

13 TYPE OF OWNERSHIP (Check one)
☒ A. PRIVATE ☐ B. FEDERAL: _____ (Agency name) ☐ C. STATE ☐ D. COUNTY ☐ E. MUNICIPAL
☐ F. OTHER: _____ (Specify) ☐ G. UNKNOWN

14 OWNER-OPERATOR NOTIFICATION ON FILE (Check all that apply)
☐ A. RCRA 3001 DATE RECEIVED: ___/___/___ (MONTH DAY YEAR) ☐ B. UNCONTROLLED WASTE SITE (CERCLA 103 c) DATE RECEIVED: ___/___/___ (MONTH DAY YEAR) ☐ C. NONE

IV. CHARACTERIZATION OF POTENTIAL HAZARD

01 ON SITE INSPECTION
☐ YES DATE ___/___/___ (MONTH DAY YEAR)
☒ NO

BY (Check all that apply)
☐ A. EPA ☐ B. EPA CONTRACTOR ☐ C. STATE ☐ D. OTHER CONTRACTOR
☐ E. LOCAL HEALTH OFFICIAL ☐ F. OTHER: _____ (Specify)
CONTRACTOR NAME(S): _____

02 SITE STATUS (Check one)	03 YEARS OF OPERATION
☒ A. ACTIVE ☐ B. INACTIVE ☐ C. UNKNOWN	Prior to 1885 (BEGINNING YEAR) ____ (ENDING YEAR) See Attachment ☐ UNKNOWN

04 DESCRIPTION OF SUBSTANCES POSSIBLY PRESENT, KNOWN, OR ALLEGED
Sulfuric acids,reagent grade chemicals,agricultural chemicals,aluminum sulfate,ammonium thiosulfate,sodium bisulfite solution,chlorosulfonic acid,dimethyl sulfate,formaldehyde and sulfamic acid,dimethylhydrocylamine

05 DESCRIPTION OF POTENTIAL HAZARD TO ENVIRONMENT AND/OR POPULATION
DuPont has numerous discharges to the air and surface water that are regulated by NJDEP.Since this has been the site of a chemical manu-facturer for over 100 years,the soil and groundwater may be contaminated.

V. PRIORITY ASSESSMENT

01 PRIORITY FOR INSPECTION (Check one. If high or medium is checked, complete Part 2 - Waste Information and Part 3 - Description of Hazardous Conditions and Incidents)
☐ A. HIGH (Inspection required promptly) ☒ B. MEDIUM (Inspection required) ☐ C. LOW (Inspect on time available basis) ☐ D. NONE (No further action needed, complete current disposition form)

VI. INFORMATION AVAILABLE FROM

01 CONTACT	02 OF (Agency/Organization)	03 TELEPHONE NUMBER
Henry Gavin	Linden Health Dept.	(201 486-3800

04 PERSON RESPONSIBLE FOR ASSESSMENT	05 AGENCY	06 ORGANIZATION	07 TELEPHONE NUMBER	08 DATE
Robert Hayton	NJDEP	HSMA	(609 292-1210	9 24 84 (MONTH DAY YEAR)

EPA FORM 2070-12 (7-81)

EPA

POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 2 - WASTE INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER

II. WASTE STATES, QUANTITIES, AND CHARACTERISTICS

01 PHYSICAL STATES (Check all that apply)

- ☐ A. SOLID
- ☐ B. POWDER, FINES
- ☐ C. SLUDGE
- ☐ D. OTHER _____ (Specify)
- ☐ E. SLURRY
- ☒ F. LIQUID
- ☐ G. GAS

02 WASTE QUANTITY AT SITE (Measures of waste quantities must be estimates)

TONS _____

CUBIC YARDS _____

NO. OF DRUMS _____

03 WASTE CHARACTERISTICS (Check all that apply)

- ☒ A. TOXIC
- ☒ B. CORROSIVE
- ☐ C. RADIOACTIVE
- ☒ D. PERSISTENT
- ☐ E. SOLUBLE
- ☐ F. INFECTIOUS
- ☐ G. FLAMMABLE
- ☐ H. IGNITABLE
- ☐ I. HIGHLY VOLATILE
- ☐ J. EXPLOSIVE
- ☒ K. REACTIVE
- ☐ L. INCOMPATIBLE
- ☐ M. NOT APPLICABLE

III. WASTE TYPE

CATEGORY	SUBSTANCE NAME	01 GROSS AMOUNT	02 UNIT OF MEASURE	03 COMMENTS
SLU	SLUDGE			
OLW	OILY WASTE			
SOL	SOLVENTS			
PSD	PESTICIDES			
OCC	OTHER ORGANIC CHEMICALS			
IOC	INORGANIC CHEMICALS			
ACD	ACIDS			
BAS	BASES			
MES	HEAVY METALS			

IV. HAZARDOUS SUBSTANCES (See Appendix for most frequently cited CAS Numbers)

01 CATEGORY	02 SUBSTANCE NAME	03 CAS NUMBER	04 STORAGE/DISPOSAL METHOD	05 CONCENTRATION	06 MEASURE OF CONCENTRATION
ACD	Sulfuric Acid	7664-93-9			
MES	Aluminum Sulfate	10043-01-3			
ACD	Ammonium Thiosulfate	7783-18-8			
ACD	Sodium Bisulfite	7631-90-5			
ACD	ChloroSulfonic Acid	7790-94-5			
SOL	DimethylSulfate	77-78-1			
OCC	Formaldehyde	50-00-0			
ACD	Sulfamic Acid	5329-58-9			
	DimethylHydrocylamine	999			
SOL	Dimethylphthalate	131-11-3			

V. FEEDSTOCKS (See Appendix for CAS Numbers)

CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER	CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER
FDS			FDS		
FDS			FDS		
FDS			FDS		
FDS			FDS		

VI. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

DWR-NJPDES permit
Science & Research-Selected Substance Survey

EPA

POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER

II. HAZARDOUS CONDITIONS AND INCIDENTS

01 [X] A. GROUNDWATER CONTAMINATION — 02 [ ] OBSERVED (DATE: _____) — [X] POTENTIAL — [ ] ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ — 04 NARRATIVE DESCRIPTION

Plant has been in operation for over 100 years. Groundwater contamination may be a problem due to prolonged period of chemical manufacture at this facility.

Attachment D

01 [X] B. SURFACE WATER CONTAMINATION — 02 [ ] OBSERVED (DATE: _____) — [X] POTENTIAL — [ ] ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ — 04 NARRATIVE DESCRIPTION

DuPont has permitted discharges to the Arthur Kill.

Attachment B

01 [X] C. CONTAMINATION OF AIR — 02 [ ] OBSERVED (DATE: _____) — [X] POTENTIAL — [ ] ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ — 04 NARRATIVE DESCRIPTION

DuPont has permitted discharges to the air.

Attachment B

01 [ ] D. FIRE/EXPLOSIVE CONDITIONS — 02 [ ] OBSERVED (DATE: _____) — [ ] POTENTIAL — [ ] ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ — 04 NARRATIVE DESCRIPTION

01 [ ] E. DIRECT CONTACT — 02 [ ] OBSERVED (DATE: _____) — [ ] POTENTIAL — [ ] ALLEGED
03 POPULATION POTENTIALLY AFFECTED _____ — 04 NARRATIVE DESCRIPTION

01 [X] F. CONTAMINATION OF SOIL — 02 [ ] OBSERVED (DATE: _____) — [X] POTENTIAL — [ ] ALLEGED
03 AREA POTENTIALLY AFFECTED: 206.27 acres (Acres) — 04 NARRATIVE DESCRIPTION

Housekeeping practices in the past may have contaminated soil.

01 [ ] G. DRINKING WATER CONTAMINATION — 02 [ ] OBSERVED (DATE: _____) — [ ] POTENTIAL — [ ] ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ — 04 NARRATIVE DESCRIPTION

01 [ ] H. WORKER EXPOSURE/INJURY — 02 [ ] OBSERVED (DATE: _____) — [ ] POTENTIAL — [ ] ALLEGED
03 WORKERS POTENTIALLY AFFECTED: _____ — 04 NARRATIVE DESCRIPTION

01 [ ] I. POPULATION EXPOSURE/INJURY — 02 [ ] OBSERVED (DATE: _____) — [ ] POTENTIAL — [ ] ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ — 04 NARRATIVE DESCRIPTION

EPA

POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION

01 STATE | 02 SITE NUMBER

II. HAZARDOUS CONDITIONS AND INCIDENTS (Continued)

01 ☐ J. DAMAGE TO FLORA — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

01 ☐ K. DAMAGE TO FAUNA — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION (Include name(s) of species)

01 ☐ L. CONTAMINATION OF FOOD CHAIN — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

01 ☐ M. UNSTABLE CONTAINMENT OF WASTES (Spills/runoff/standing liquids/leaking drums) — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ 04 NARRATIVE DESCRIPTION

01 ☐ N. DAMAGE TO OFFSITE PROPERTY — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

01 ☐ O. CONTAMINATION OF SEWERS, STORM DRAINS, WWTPs — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

01 ☐ P. ILLEGAL/UNAUTHORIZED DUMPING — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

05 DESCRIPTION OF ANY OTHER KNOWN, POTENTIAL, OR ALLEGED HAZARDS

Eckhardt lists this site as having disposed of approximately 7951 tons of chemical waste on site by various disposal methods.
Attachment C

III. TOTAL POPULATION POTENTIALLY AFFECTED: _____

IV. COMMENTS

V. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

NJDEP-Division of Water Resources-NJPDES Permit
NJDEP-Division of Science & Research

EPA FORM 2070-12 (7-81)

Preliminary Assessment

E.I. DuPont
Grasselli Plant
Linden, New Jersey 07036
Union County

EPA ID # NJD980771364

PRELIMINARY ASSESSMENT FILE SEARCH

Grassville Plant

NJDEP

EI Dupont Grasselli plant

DIVISION OF WATER RESOURCES:

A. Enforcement NJDES

B. Groundwater ✓ NO file

C. Other ✓

DIVISION OF WASTE MANAGEMENT:

A. HSMA NO file

B. Enforcement ✓ yardville NO file

C. Solid Waste will call back 9/14 NO file

ENVIRONMENTAL QUALITY:

A. Air Pollution

B. Pesticides

C. Other

DIVISION OF FISH AND GAME:

OFFICE OF SCIENCE AND RESEARCH:

A. Industrial Survey

B. Other

N.J. DEPARTMENT OF HEALTH:

LOCAL AUTHORITIES:

A. Health Department ✓ File H. Gavin

B. Town or County Clerk TAXmap Engineers office

UNITED STATES GOVERNMENT:

A. EPA

B. other

V. THE ROLE OF OUR PLANT AT LINDEN, N.J., IN ENVIRONMENTAL CONTROL (Cont'd)

F. Environmental Control Facilities in Our Plant - Present & Future

Present

- Investment in plant environmental control facilities totals approximately $1 million.
- Equipment includes many mist collectors, fume scrubbers, absorbers, dust collectors, neutralization systems and retention ponds.
- The most modern instrumentation and analyzers are used to monitor our processes.
- We monitor and control sulfur dioxide emitting stacks.
- We consume low sulfur fuel.
- We have reduced our Biochemical Oxygen Demand (BOD) load to the Arthur Kill > 80% since 1968 by barging to sea.
- We have pH monitors and alarms on effluents.
- We have continuous temperature recording to avoid thermal discharges to Arthur Kill.
- We discontinued the use of our incinerator in 1969.
- We isolate our sources of excessive noise and monitor our employees' hearing by annual audiograms.

Future

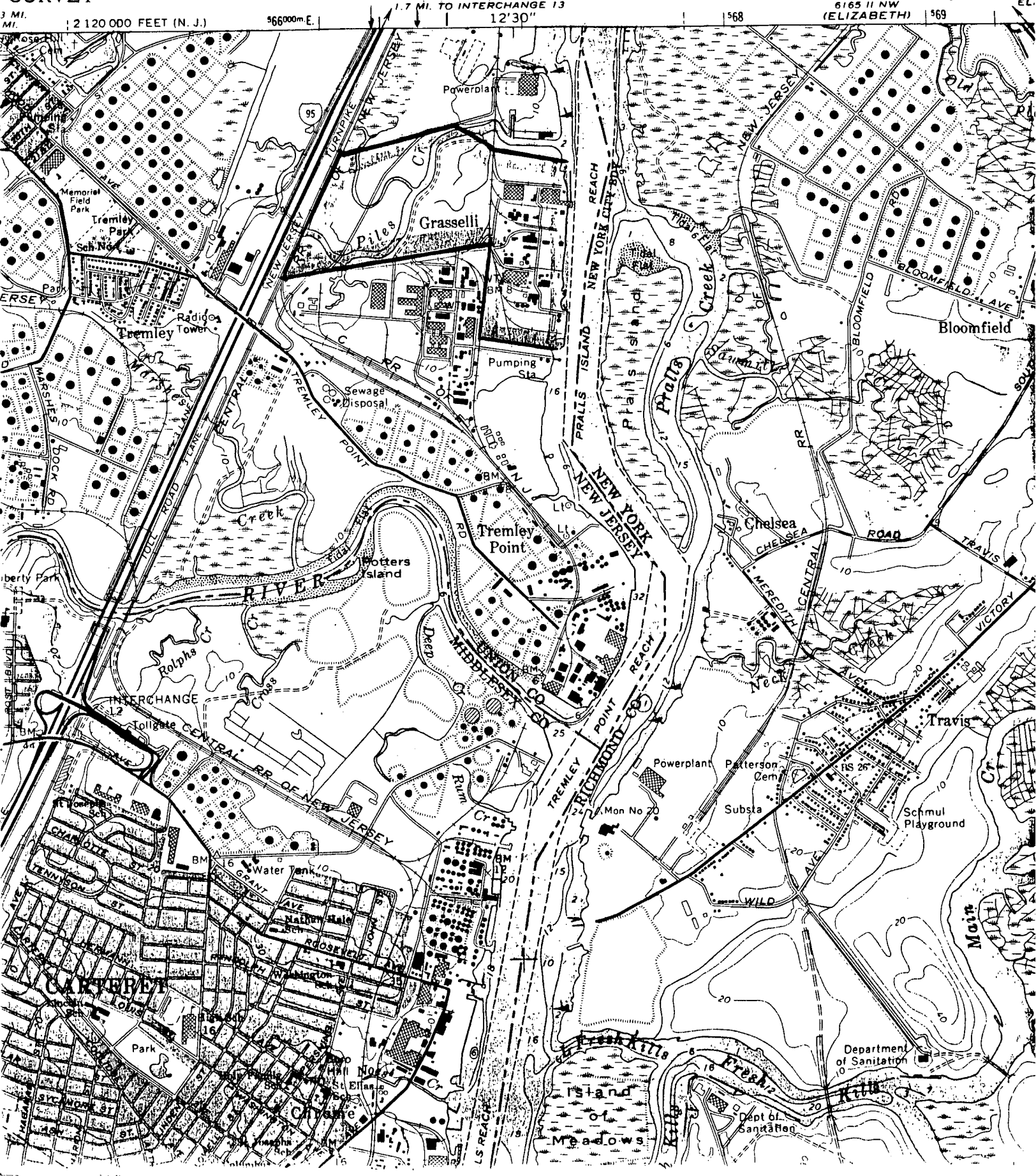
We have designed into recently approved projects:

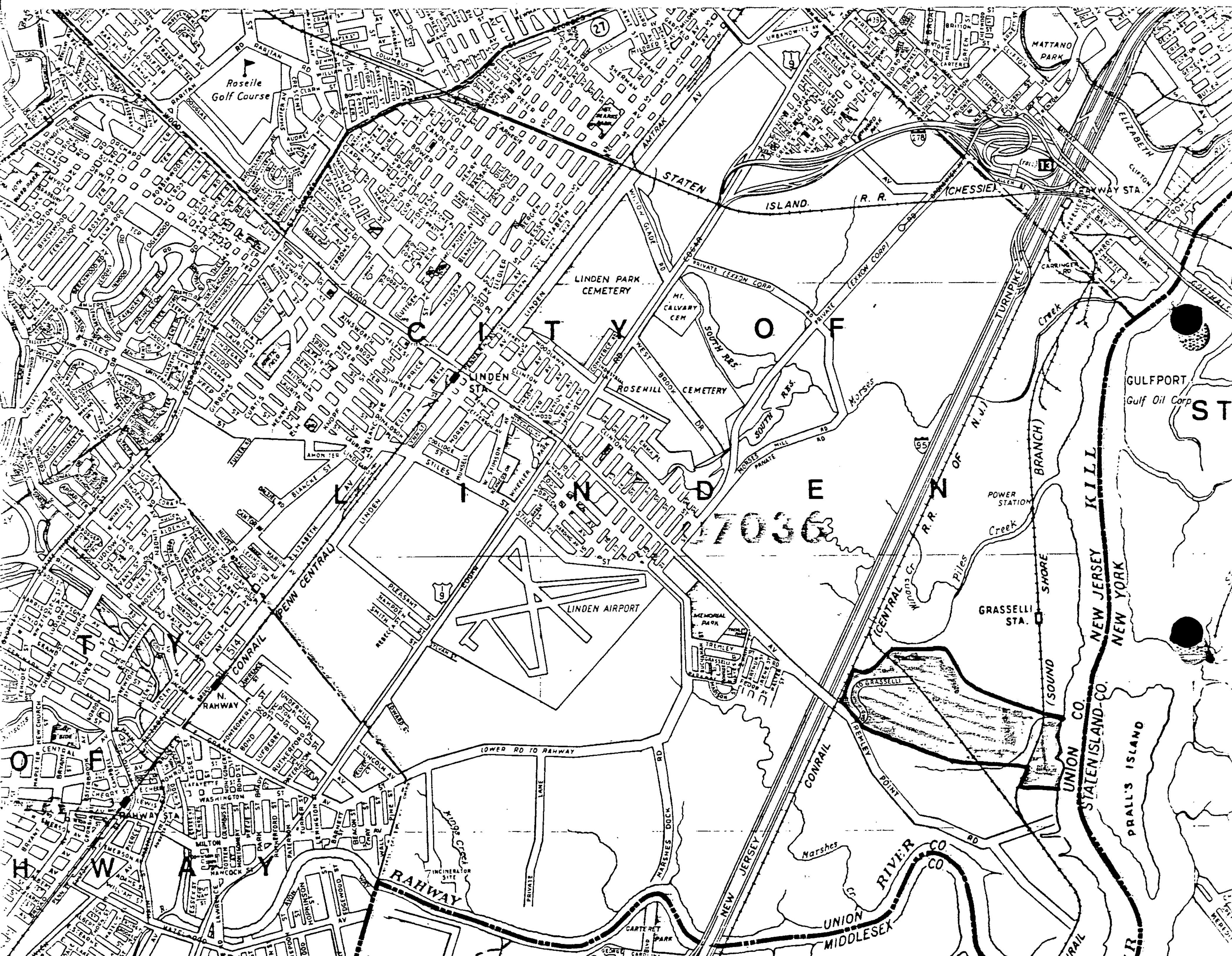
- A burner to convert all off-gases to carbon dioxide and water. (> 98% efficiency)
- Neutralization facilities to avoid discharge of objectionable effluents.
- New facilities to eliminate a type of furnacing operation in existence here at Grasselli for over 61 years in which we have difficulty controlling gaseous emissions.
- Additional alarm and detection systems to avoid acidic effluent discharges.

We are continually studying all existing processes to further reduce wastes and/or to improve the method of disposal.

TATES
THE INTERIOR
SURVEY

EI Dupont
Grasselli Plant
Linden
LAT. 40° 36' 53"
Long. 74° 12' 28"
Arthur Kill Quad - (G 12)




CITY OF LINDEN
07036
Roselle Golf Course
LINDEN PARK CEMETERY
MT. CALVARY CEM
ROSEHILL CEMETERY
LINDEN STA.
LINDEN AIRPORT
N. RAHWAY
RAHWAY STA.
MATTANO PARK
MEMORIAL PARK
STATEN ISLAND R.R. (CHESSIE)
CONRAIL
PENN CENTRAL
TURNPIKE
(CENTRAL R.R. OF N.J.)
SHORE BRANCH
POWER STATION
GRASSELLI STA.
GULFPORT
Gulf Oil Corp
KILL
NEW JERSEY
NEW YORK
UNION CO.
STATEN ISLAND CO.
PRALL'S ISLAND
RAHWAY
UNION CO.
MIDDLESEX CO.
RIVER
LOWER RD TO RAHWAY
TREMLEY POINT RD
INCINERATOR SITE
CARTERET PARK
Marshes
Piles Creek
Morses Creek
SOUTH RES.
LINDEN
OF
RAHWAY

CH-1076

DUPONT

ESTABLISHED 1802

E. I. DU PONT DE NEMOURS & COMPANY
INCORPORATED

GRASSELLI PLANT
LINDEN, NEW JERSEY 07036

CHEMICALS, DYES AND PIGMENTS DEPARTMENT

May 29, 1980

Industrial Survey Project
P.O. Box 251
Trenton, New Jersey 08602

Dear Sirs:

We attach our completed report forms for your Selected Substances Survey.

Very truly yours,

H. W. McDowell
Environmental Coordinator

HWM/mel
Attach.

Attachment A

State of New Jersey
Department of Environmental Protection

OFFICE OF THE COMMISSIONER

ID 40067
CI 2009

Return forms to:
INDUSTRIAL SURVEY PROJECT
P.O. BOX 251
TRENTON, NEW JERSEY 08602

SELECTED SUBSTANCE REPORT

PART I – General Plant Information

COMPLETE ONE REPORT FOR EACH PLANT SITE OR FACILITY LOCATION

1. Company Name E. I. du Pont de Nemours and Company, Inc.
2. Division or Plant Name CD&P Department
3. Mailing Address (Street) Grasselli Plant
   (City/Town) Linden County Union State N.J. Zip Code 07036
4. Plant Location Address (Street) Same
   (If not as above)
   (City/Town) County State Zip Code
5. Date Plant Began Operations At This Location 1928 (Du Pont - owned)
6. Person to Contact Regarding this Report H.W. McDowell Title Environmental Coordinat
7. Phone Number (Area Code) (201) 862-1500
8. SIC Code (Four Digit) 2819 2869
9. Nature of Business Chemical Manufacturer
10. Number of Production Employees at this Plant Site 325
11. Does this plant manufacture, process, form, repackage, release, use, dispose of or store any of the selected substances shown on Table I of the enclosed instructions? (Check One) YES [X] NO [ ]

    If your answer to number 11 is "YES", complete the Entire Report for your facility, sign and return.

    If your answer to number 11 is "NO", complete Question 15, sign and return.

I, HEREBY, CERTIFY THAT ALL STATEMENTS MADE BY ME IN THIS REPORT ARE TRUE, COMPLETE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND THAT ESTIMATES WHERE USED HAVE BEEN MADE IN GOOD FAITH.

NAME (Print) Harry W. McDowell Signature Harry W McDowell

Title Environmental Coordinator Date May 29, 1980

12A. Sketch (On the reverse side of this page) or attach a copy of a map indicating the exact location of the plant site.

12B. Supply your Dun & Bradstreet number if available. 00 218 5965

FOR OFFICIAL USE ONLY

E 5669 S 2819 N 44963
B 500 O 1978 A 2
C 03
V 2
D&B 002185965

M1

123

ARTHUR KILL QUAD

PART I – General Information (continued)

13. List all of the selected [illegible]es included in this report along with their CAS N[illegible] From Table I of the instructio[illegible]ch are manufactured, processed, formed, repackag[illegible]ased, used, disposed of or stored at the plant site:

Dimethyl Phthalate 131-11-3

Formaldehyde 50-00-0

14. Wastewater Discharges – Complete the following information:

A. Discharge to publicly owned treatment works (POTW):

1. Name of Utility (POTW) Not Applicable

Address/Location

2. Estimated Average Volume of Wastewater Discharged to POTW in a day:

Not Applicable gallons.

3. Briefly describe any pretreatment methods

Not Applicable

4. Wastewater consists of: ( ) Process Water, ( ) Contact Cooling, ( ) Non-Contact Cooling, ( ) Domestic Sewage, ( ) Contaminated Storm Water, ( ) Washdown Water, ( ) Scrubber Water, ( ) Other: Not Applicable

B. Discharge to Navigable Waterway or Tributary Stream:

1. Name of Receiving Stream Arthur Kill

2. NPDES Permit Number NJ0002640

3. Estimated average volume of wastewater discharged to receiving stream in a day

19,000,000 gallons. (Plant Total)

4. Briefly describe any treatment methods Neutralization and settling ponds.

5. Wastewater consists of: (X) Process Water, ( ) Contact Cooling, (X) Non-Contact Cooling, ( ) Domestic Sewage, (X) Contaminated Storm Water, (X) Washdown Water, (X) Scrubber Water, ( ) Other:

15. Previous disposal practices (1930–1977). Has this plant previously disposed of wastes containing any of the selected substances at any land disposal site (i.e. by land spreading or burial, landfilling, lagoon or seepage pit) either on or off site?

YES [X] NO [ ]

If available provide the following information for each disposal site. Use additional pages if necessary.

Name and Location of Site Industrial Reclaiming Edison, New Jersey

Time period site was used 1974-77

Name of selected substances disposed of at this site	Physical State	Amount of selected substance disposed at site (pounds)
Methoxychlor	Slurry	30,000 (estimated)

State of New Jersey
Department of Environmental Protection

PART II — SELECTED SUBSTANCE REPORT

COMPLETE ONE FORM FOR EACH SELECTED SUBSTANCE — FOR DEP USE

1. Name and Location of Plant: E. I. du Pont de Nemours & Co. Linden, New Jersey — I.D. 40007

2. Selected Substance Name: Dimethyl Phthalate — CAS #: 131-11-3 — 04 | 131 | 11 | 3

3. Briefly Describe Its Use On The Site: Added to a finished product as a stabilizer. — S-01

	COMPLETE THE FOLLOWING INFORMATION FOR THE PLANT BASED ON 1978 USAGE	ENTER THE ACTUAL OR ESTIMATED AMOUNTS	USE THE REQUESTED UNITS	ACTUAL	ESTIMATE
THROUGH-PUT QUANTITIES	4. QUANTITY PRODUCED ON SITE	None	lbs/yr.	X	
	5. QUANTITY BROUGHT ONTO SITE	CBI	lbs/yr.		
	6. QUANTITY CONSUMED ON SITE	None	lbs/yr.	X	
	7. QUANTITY SHIPPED OFF SITE AS (OR IN) PRODUCT	CBI	lbs/yr.		
	8. MAXIMUM INVENTORY	CBI	lbs		
AIR EMISSIONS	9. TOTAL STACK EMISSIONS OF SELECTED SUBSTANCE	Negligible*	lbs/yr.		
		Negligible	max lbs/day		
	10. TOTAL FUGITIVE EMISSIONS OF SELECTED SUBSTANCE	Negligible*	lbs/yr.		
		Negligible	max lbs/day		
WASTEWATER DISCHARGE	11. TOTAL DISCHARGE OF SELECTED SUBSTANCE INTO SURFACE WATER	400*	lbs/yr.		X
		2	max lbs/day		X
	12. TOTAL DISCHARGE OF SELECTED SUBSTANCE INTO PUBLICLY OWNED TREATMENT WORKS	None	lbs/yr.	X	
		None	max lbs/day	X	

13. DISPOSAL OF WASTE CONTAINING THE SELECTED SUBSTANCE

LOCATION OF FINAL DISPOSAL SITE NAME AND ADDRESS	PHYSICAL STATE TABLE A	DISPOSAL METHOD TABLE B	QUANTITY OF SELECTED SUBSTANCE DISPOSED (lbs)	FOR DEP USE
1. Not Applicable				
2.				
3.				
4.				
5.				

TABLE A
PHYSICAL STATE
W-01 Solid
W-02 Liquid
W-03 Slurry
W-04 Sludge
W-05 Other (specify)

TABLE B
DISPOSAL METHODS
M-01 Composting
M-02 Evaporation
M-03 Holding Tank
M-04 Incineration
M-05 Injection Well
M-06 Lagoon
M-07 Land Burial
M-08 Land Spreading
M-09 Neutralization
M-10 Ocean
M-11 Recycling
M-12 Sanitary Landfill
M-13 Surface Water
M-14 Subsurface System
M-15 Pyrolysis
M-16 Spray Irrigation
M-17 Stored On Site
M-18 Other (specify)

*Pump directly from drums to hold tank into a finished product. Drums are not rinsed or washed. Only loss from leaks.

State of New Jersey
Department of Environmental Protection

PART II — SELECTED SUBSTANCE REPORT

COMPLETE ONE FORM FOR EACH SELECTED SUBSTANCE — FOR DEP USE

1. Name and Location of Plant: E. I. du Pont de Nemours & Co. Linden, New Jersey — I.D. 40007

2. Selected Substance Name: Formaldehyde — CAS #: 50-00-0 — 07 | 50 | 00 | 0

3. Briefly Describe Its Use On The Site:

Produced by oxidation of methanol for off-plant sales.

	COMPLETE THE FOLLOWING INFORMATION FOR THE PLANT BASED ON 1978 USAGE	ENTER THE ACTUAL OR ESTIMATED AMOUNTS	USE THE REQUESTED UNITS	ACTUAL	ESTIMATE
THROUGH-PUT QUANTITIES	4. QUANTITY PRODUCED ON SITE	CBI	lbs/yr.		
	5. QUANTITY BROUGHT ONTO SITE	None	lbs/yr.	X	
	6. QUANTITY CONSUMED ON SITE	None	lbs/yr.	X	
	7. QUANTITY SHIPPED OFF SITE AS (OR IN) PRODUCT	CBI	lbs/yr.		
	8. MAXIMUM INVENTORY	CBI	lbs		
AIR EMISSIONS	9. TOTAL STACK EMISSIONS OF SELECTED SUBSTANCE	20,000	lbs/yr.		X
		100	max lbs/day		X
	10. TOTAL FUGITIVE EMISSIONS OF SELECTED SUBSTANCE	* 88888	lbs/yr.		
		* 88888	max lbs/day		
WASTEWATER DISCHARGE	11. TOTAL DISCHARGE OF SELECTED SUBSTANCE INTO SURFACE WATER	None	lbs/yr.		X
		None	max lbs/day		X
	12. TOTAL DISCHARGE OF SELECTED SUBSTANCE INTO PUBLICLY OWNED TREATMENT WORKS	None	lbs/yr.	X	
		None	max lbs/day	X	

13. DISPOSAL OF WASTE CONTAINING THE SELECTED SUBSTANCE

	LOCATION OF FINAL DISPOSAL SITE NAME AND ADDRESS	PHYSICAL STATE TABLE A	DISPOSAL METHOD TABLE B	QUANTITY OF SELECTED SUBSTANCE DISPOSED (lbs)	FOR DEP USE
1.	E.I. du Pont de Nemours & Co; Linden, New Jersey	W-02 ~~W-05~~ (Gas)	M-04	186,000	
2.					
3.					
4.					
5.					

Not a SWA permit

TABLE A — PHYSICAL STATE
W-01 Solid
W-02 Liquid
W-03 Slurry
W-04 Sludge
W-05 Other (specify)

TABLE B — DISPOSAL METHODS
M-01 Composting
M-02 Evaporation
M-03 Holding Tank
M-04 Incineration
M-05 Injection Well
M-06 Lagoon
M-07 Land Burial
M-08 Land Spreading
M-09 Neutralization
M-10 Ocean
M-11 Recycling
M-12 Sanitary Landfill
M-13 Surface Water
M-14 Subsurface System
M-15 Pyrolysis
M-16 Spray Irrigation
M-17 Stored On Site
M-18 Other (specify)

*Acurex, Inc. currently under contract to EPA to study fugitive emissions from formaldehyde plants.

New Jersey Department of Environmental Protection
Division of Water Resources
Municipal Waste Management
CN-029
Trenton, N.J. 08625
(609) 984-4429

MAR 0 5 1984

PUBLIC NOTICE

NOTICE: ISSUANCE OF DRAFT NJPDES PERMIT NJ0002640

Notice is hereby given that:

E.I. DuPont DeNemours & Co.
1007 Market Street
Wilmington, DE 19898

has applied to the New Jersey Department of Environmental Protection (NJDEP) for a draft New Jersey Pollutant Discharge Elimination System (NJPDES) permit to discharge from a facility located in Linden, Union County, New Jersey. The facility, referred to as the Grasselli Plant, is classified as a Major by U.S. EPA. The company's application is for renewal of an existing NJPDES permit. The receiving stream is Arthur Kill, classified as TW-3 waters.

The applicant is primarily involved in the manufacture of inorganic chemicals. Organic chemicals account for approximately 12 percent of total chemical production. The applicant has classified its chemical production according to the following industrial activities: dimethyl sulfate, reagent acids (sulfuric, nitric and hydrochloric), chlorosulfonic acid, sulfur trioxide, ammonium thiosulfate, sodium bisulfite, sulfuric acid (other nonreagent grades), formaldehyde and dimethyl hydrocyl amine. The SIC codes for the facility are 2819 and 2869.

There are four cooling water/process water discharge points which are designated as Discharge Serial Numbers (DSN) 004, 005, 008 and 009. DSN 004 averages 3.34 MGD and consists of cooling water from dimethyl hydrocyl amine production. DSN 005 averages 0.61 MGD and consists of cooling and process waters from dimethyl sulfate production. DSN 008 averages 1.92 MGD and consists of treated cooling water process waters from reagent acids, chlorosulfonic acid, sulfur trioxide and ammonium thiosulfate production; and treated process water from sodium bisulfite production. DSN 009 averages 3.57 MGD and consists of treated cooling and process waters from sulfuric acid and formaldehyde production.

The DSN 008 treatment system consists of first-stage neutralization, equalization, second-stage neutralization and suspended solids settling. The DSN 009 treatment system consists of neutralization.

For an existing facility, issuance of the NJPDES permit is the enforcement mechanism by which pollutant discharges are brought into compliance with standards.

Attachment B

This notice is being given to inform the public that NJDEP has prepared a draft NJPDES permit. This draft permit contains conditions necessary to implement the provisions of the "Regulations Concerning the New Jersey Pollutant Discharge Elimination System" (N.J.A.C. 7:14A-1 et seq.), which were promulgated pursuant to the authority of the New Jersey "Water Pollution Control Act" (N.J.S.A. 58:10A-1 et seq.).

The draft permit prepared by NJDEP is based on the administrative record which is on file at the offices of the NJDEP, Division of Water Resources, located at 1474 Prospect Street in the Township of Ewing, Mercer County, New Jersey. It is available for inspection, by appointment, between 8:30 a.m. and 4:00 p.m., Monday through Friday. Appointments for inspection may be scheduled by calling (609) 984-4428.

Interested persons may submit written comments on the draft permit to the Administrator, Water Quality Management, at the address cited above. All comments shall be submitted within 30 days of the date of this public notice. All persons, including applicants, who believe that any condition of this draft permit is inappropriate or that the Department's tentative decision to issue this draft permit is inappropriate, must raise all reasonably ascertainable issues and submit all reasonably available arguments and factual grounds supporting their position, including all supporting material, by the close of the public comment period. All comments submitted by interested persons in response to this notice, within the time limit, will be considered by the NJDEP with respect to the permit application. At the close of the public comment period, the Department will issue or deny the permit. The Department will respond to all significant and timely comments when a final permit is issued. The applicant and each person who has submitted written comments will receive notice of NJDEP's final decision.

Any interested person may request in writing that NJDEP hold a non-adversarial public hearing on the draft permit. This request shall state the nature of the issues to be raised in the proposed hearing and shall be submitted within 30 days of the date of this public notice to the Administrator, Water Quality Management at the address cited above. A public hearing will be conducted whenever the NJDEP determines that there is a significant degree of public interest in the permit decision. If a public hearing is held, the public comment period in this notice shall automatically be extended to the close of the public hearing.

Arnold Schiffman
Administrator
Water Quality Management

WQM98-A/PN3:fmm

State of New Jersey
Department of Environmental Protection
Division of Water Resources
1474 Prospect St., CN-029
Trenton, New Jersey 08625

FACT SHEET
FOR DRAFT NJPDES PERMIT TO DISCHARGE INTO THE WATERS OF THE STATE OF NEW JERSEY

No. NJPDES	Application No.	Date:
	NJ0002640	

Name and Address of Applicant: E.I. DuPont DeNemours & Co.
1007 Market Street
Wilmington, DE 19898

Name and Address of Facility where Discharge Occurs: E.I. DuPont, Grasselli Plant
South Wood Ave.
Linden, N.J. 07036

Receiving Water: Arthur Kill

Classification: TW-3

I. LOCATION OF DISCHARGE

The above named applicant has applied for a New Jersey Pollutant Discharge Elimination System (NJPDES) permit, to the State of New Jersey Department of Environmental Protection, Division of Water Resources to discharge into the designated receiving water.

A description and/or sketch of the location of the discharge is appended as Attachment I.

II. DESCRIPTION OF FACILITY

A brief description of the type of facility or activity which is the subject of the draft permit is provided in the Public Notice of preparation of this draft permit.

LOCATION OF FACILITY

AND DISCHARGE

CONTINUED FROM THE FRONT

VII. SIC CODES (4-digit, in order of priority)

A. FIRST	B. SECOND
2819 (specify) INDUSTRIAL INORGANIC CHEMICALS	2869 (specify) INDUSTRIAL ORGANIC CHEMICALS
C. THIRD	**D. FOURTH**
(specify)	(specify)

VIII. OPERATOR INFORMATION

A. NAME

E. I. DU PONT DE NEMOURS AND COMPANY

B. Is the name listed in Item VIII-A also the owner? ☒ YES ☐ NO

C. STATUS OF OPERATOR (Enter the appropriate letter into the answer box; if "Other", specify.)

F = FEDERAL S = STATE P = PRIVATE M = PUBLIC (other than federal or state) O = OTHER (specify)

P (specify)

D. PHONE (area code & no.)

A 201 862 1500

E. STREET OR P.O. BOX

1007 MARKET STREET

F. CITY OR TOWN	G. STATE	H. ZIP CODE
B WILMINGTON	DE	19898

IX. INDIAN LAND

Is the facility located on Indian lands? ☐ YES ☒ NO

X. EXISTING ENVIRONMENTAL PERMITS

A. NPDES (Discharges to Surface Water)	D. PSD (Air Emissions from Proposed Sources)
9 N NJ0002640	9 P
B. UIC (Underground Injection of Fluids)	**E. OTHER (specify)**
9 U	9 (specify) SEE ATTACHED SHEET
C. RCRA (Hazardous Wastes)	**E. OTHER (specify)**
9 R	9 (specify)

XI. MAP

Attach to this application a topographic map of the area extending to at least one mile beyond property bounderies. The map must show the outline of the facility, the location of each of its existing and proposed intake and discharge structures, each of its hazardous waste treatment, storage, or disposal facilities, and each well where it injects fluids underground. Include all springs, rivers and other surface water bodies in the map area. See instructions for precise requirements.

XII. NATURE OF BUSINESS (provide a brief description)

The Grasselli Plant is a division of the Chemicals and Pigments Department of E. I. du Pont de Nemours and Company. The plant is engaged in the manufacture of Sulfuric Acids, Reagent Grade Chemicals, Agricultural Chemicals, Aluminum Sulfate, Ammonium Thiosulfate, Sodium Bisulfite Solution, Chlorosulfonic Acid, Dimethyl Sulfate, Formaldehyde and Sulfamic Acid.

XIII. CERTIFICATION (see instructions)

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this application and all attachments and that, based on my inquiry of those persons immediately responsible for obtaining the information contained in the application, I believe that the information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

A. NAME & OFFICIAL TITLE (type or print)	B. SIGNATURE	C. DATE SIGNED
Robert J. Blair, Vice President Chemicals and Pigments	Robert J. Blair	5/20/81

COMMENTS FOR OFFICIAL USE ONLY

C

CONTINUED FROM THE FRONT

VII. SIC CODES (4-digit, in order of priority)

A. FIRST	B. SECOND
2819 (specify) INDUSTRIAL INORGANIC CHEMICALS	2869 (specify) INDUSTRIAL ORGANIC CHEMICALS
C. THIRD	**D. FOURTH**
(specify)	(specify)

VIII. OPERATOR INFORMATION

A. NAME

E. I. DU PONT DE NEMOURS AND COMPANY

B. Is the name listed in Item VIII-A also the owner? ☒ YES ☐ NO

C. STATUS OF OPERATOR (Enter the appropriate letter into the answer box; if "Other", specify.)

F = FEDERAL; S = STATE; P = PRIVATE; M = PUBLIC (other than federal or state); O = OTHER (specify)

P (specify)

D. PHONE (area code & no.)

201 862 1500

E. STREET OR P.O. BOX

1007 MARKET STREET

F. CITY OR TOWN

WILMINGTON

G. STATE

DE

H. ZIP CODE

19898

IX. INDIAN LAND

Is the facility located on Indian lands? ☐ YES ☒ NO

X. EXISTING ENVIRONMENTAL PERMITS

A. NPDES (Discharges to Surface Water)

N NJ0002640

B. UIC (Underground Injection of Fluids)

U

C. RCRA (Hazardous Wastes)

R

D. PSD (Air Emissions from Proposed Sources)

P

E. OTHER (specify)

(specify) SEE ATTACHED SHEET

E. OTHER (specify)

(specify)

XI. MAP

Attach to this application a topographic map of the area extending to at least one mile beyond property bounderies. The map must show the outline of the facility, the location of each of its existing and proposed intake and discharge structures, each of its hazardous waste treatment, storage, or disposal facilities, and each well where it injects fluids underground. Include all springs, rivers and other surface water bodies in the map area. See instructions for precise requirements.

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The Grasselli Plant is a division of the Chemicals and Pigments Department of E. I. du Pont de Nemours and Company. The plant is engaged in the manufacture of Sulfuric Acids, Reagent Grade Chemicals, Agricultural Chemicals, Aluminum Sulfate, Ammonium Thiosulfate, Sodium Bisulfite Solution, Chlorosulfonic Acid, Dimethyl Sulfate, Formaldehyde and Sulfamic Acid.

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A. NAME & OFFICIAL TITLE (type or print)	B. SIGNATURE	C. DATE SIGNED
Robert J. Blair, Vice President Chemicals and Pigments	Robert J. Blair	5/20/80

COMMENTS FOR OFFICIAL USE ONLY

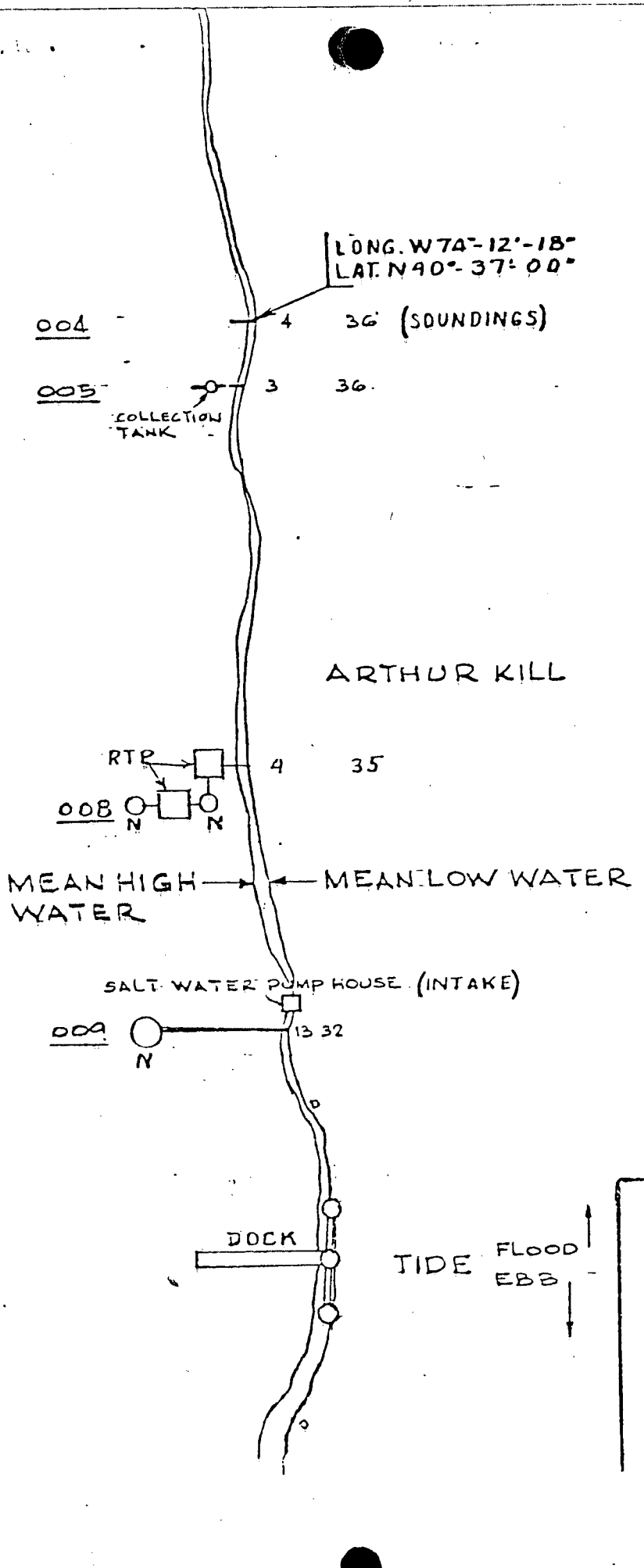
FORM 1 GENERAL

X EXISTING ENVIRONMENTAL PERMITS

1. Federal Permit (EPA) NJ006

2. New Jersey State Permits (Air)

3240	18361	40702
3241	19140	40706
3242	21280	41583
3243	21896	44033
3351	22734	45249
3352	23182	45445
3353	24403	46052
3354	25613	48050
3355	30878	
	31359	
3865	31572	
4664	31574	
5624		
6010	32555	
8603	32556	
	32658	
12225	32882	
12511	34586	
12698	36271	
13649	37188	



E. I. DU PONT DE NEMOURS & CO.
GRASSELLI PLANT - LINDEN, N.J.

OUTFALL LAYOUT MARCH 27, 1981

SK 7659 SHT 1 OF 5

Please print or type in the unshaded areas only

EPA I.D. NUMBER (copy from Item 1 of Form 1) D002185965

Form Approved OMB No. 158-R0173

FORM 2C NPDES

U.S. ENVIRONMENTAL PROTECTION AGENCY
APPLICATION FOR PERMIT TO DISCHARGE WASTEWATER
EXISTING MANUFACTURING, COMMERCIAL, MINING AND SILVICULTURAL OPERATIONS
Consolidated Permits Program NJ0002640

I. OUTFALL LOCATION

For each outfall, list the latitude and longitude of its location to the nearest 15 seconds and the name of the receiving water.

A. OUTFALL NUMBER (list)	B. LATITUDE 1. DEG.	2. MIN.	3. SEC.	C. LONGITUDE 1. DEG.	2. MIN.	3. SEC.	D. RECEIVING WATER (name)

II. FLOWS, SOURCES OF POLLUTION, AND TREATMENT TECHNOLOGIES

A. Attach a line drawing showing the water flow through the facility. Indicate sources of intake water, operations contributing wastewater to the effluent, and treatment units labeled to correspond to the more detailed descriptions in Item B. Construct a water balance on the line drawing by showing average flows between intakes, operations, treatment units, and outfalls. If a water balance cannot be determined *(e.g., for certain mining activities)*, provide a pictorial description of the nature and amount of any sources of water and any collection or treatment measures.

B. For each outfall, provide a description of: (1) All operations contributing wastewater to the effluent, including process wastewater, sanitary wastewater, cooling water, and storm water runoff; (2) The average flow contributed by each operation; and (3) The treatment received by the wastewater. Continue on additional sheets if necessary.

1. OUTFALL NO (list)	2. OPERATION(S) CONTRIBUTING FLOW a. OPERATION (list)	b. AVERAGE FLOW (include units)	3. TREATMENT a. DESCRIPTION	b. LIST CODES FROM TABLE 2C-1	
009	Sulfuric Acid Manufacture	∠ 0.01 MGD	Discharge to waterway is non-contact cooling water. However, a neutralization system is in place to handle an acid cooler leak.	2-K	
	Non-Contact Cooling Water	3.1 MGD		4-A	

OFFICIAL USE ONLY (effluent guidelines sub-categories)

CONTINUE ON REVERSE

CONTINUED FROM THE FRONT

C. Except for storm runoff, leaks, or spills, are any of the discharges described in Items II-A or B intermittent or seasonal?

☒ YES (complete the following table) ☐ NO (go to Section III)

1. OUTFALL NUMBER (list)	2. OPERATION(s) CONTRIBUTING FLOW (list)	3. FREQUENCY a. DAYS PER WEEK (specify average)	3. FREQUENCY b. MONTHS PER YEAR (specify average)	4. FLOW a. FLOW RATE (in mgd) 1. LONG TERM AVERAGE	4. FLOW a. FLOW RATE (in mgd) 2. MAXIMUM DAILY	4. FLOW b. TOTAL VOLUME (specify with units) 1. LONG TERM AVERAGE	4. FLOW b. TOTAL VOLUME (specify with units) 2. MAXIMUM DAILY	4. FLOW c. DURATION (in days)
004	Anisole Manufacture	7	3	None*	None	None	None	90
	Non-Contact Cooling Water	7	3	0.2	0.4			90

*Process wastes are collected and barged to sea for disposal (EPA Permit NJ006)

III. MAXIMUM PRODUCTION

A. Does an effluent guideline limitation promulgated by EPA under Section 304 of the Clean Water Act apply to your facility?

☐ YES (complete Item III-B) ☒ NO (to to Section IV)

B. Are the limitations in the applicable effluent guideline expressed in terms of production (or other measure of operation)?

☐ YES (complete Item III-C) ☐ NO (go to Section IV)

C. If you answered "Yes" to Item III-B, list the quantity which represents an actual measurement of your maximum level of production, expressed in the terms and units used in the applicable effluent guideline, and indicate the affected outfalls.

1. MAXIMUM QUANTITY a. QUANTITY PER DAY	1. MAXIMUM QUANTITY b. UNITS OF MEASURE	1. MAXIMUM QUANTITY c. OPERATION, PRODUCT, MATERIAL, ETC. (specify)	2. AFFECTED OUTFALLS (list outfall numbers)

IV. IMPROVEMENTS

A. Are you now required by any Federal, State or local authority to meet any implementation schedule for the construction, upgrading or operation of wastewater treatment equipment or practices or any other environmental programs which may affect the discharges described in this application? This includes, but is not limited to, permit conditions, administrative or enforcement orders, enforcement compliance schedule letters, stipulations, court orders, and grant or loan conditions.

☐ YES (complete the following table) ☒ NO (go to Item IV-B)

1. IDENTIFICATION OF CONDITION, AGREEMENT, ETC.	2. AFFECTED OUTFALLS a. NO.	2. AFFECTED OUTFALLS b. SOURCE OF DISCHARGE	3. BRIEF DESCRIPTION OF PROJECT	4. FINAL COMPLIANCE DATE a. REQUIRED	4. FINAL COMPLIANCE DATE b. PROJECTED

B. OPTIONAL: You may attach additional sheets describing any additional water pollution control programs (or other environmental projects which may affect your discharges) you now have underway or which you plan. Indicate whether each program is now underway or planned, and indicate your actual or planned schedules for construction. ☐ MARK "X" IF DESCRIPTION OF ADDITIONAL CONTROL PROGRAMS IS ATTACHED

CONTINUED FROM THE FRONT

VII. BIOLOGICAL TOXICITY TESTING DA

Do you have any knowledge or reason to believe that any biological test for acute or chronic toxicity has been made on any of your discharges or on a receiving water in relation to your discharge within the last 3 years?

☐ YES *(identify the test(s) and describe their purposes below)* ☒ NO *(go to Section VIII)*

VIII. CONTRACT ANALYSIS INFORMATION

Were any of the analyses reported in Item V performed by a contract laboratory or consulting firm?

☒ YES *(list the name, address, and telephone number of, and pollutants analyzed by, each such laboratory or firm below)* ☐ NO *(go to Section IX)*

A. NAME	B. ADDRESS	C. TELEPHONE (area code & no.)	D. POLLUTANTS ANALYZED (list)
Acurex Corporation	485 Clyde Avenue Mountain View, CA 94042	(415) 964-3200	All substances in V-C except Phenol
Interstate Sanitation Commission	10 Columbus Circle New York, New York 10019	(212) 582-0380	BOD in V-A
New York Testing Laboratories, Inc.	P.O. Box 484 81 Urban Avenue Westbury, L.I., N.Y. 11590	(516) 334-7770	Oil and Grease in V-B and Phenol in V-C

IX. CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this application and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

A. NAME & OFFICIAL TITLE (type or print)	B. PHONE NO. (area code & no.)
Robert J. Blair, Vice President Chemicals and Pigments	(302) 774-1825
C. SIGNATURE Robert J. Blair	D. DATE SIGNED 5/6/81

SITE: NUMBER 1703 PAGE 1 FOR THIS SITE
GRASSELLI PLANT
X----
LINDEN,NJ 07036

COMPANY: COMPANY-FACILITY NUMBER 16035
E.I. DUPONT DE NEMOURS & CO. INC.
CHEMICALS, DYES & PIGMENTS DEP
GRASSELLI PLANT
X----
LINDEN,NJ 07036

FIRST YEAR USED: 1928
LAST YEAR USED: 1979

HUNDRED TONS: 7951
THOUSAND CUBIC YDS.: .
THOUSAND GALLONS: .

ATTACHMENT 10

COMPOSITION OF WASTE:

HEAVY1			HEAVY4				
ORGAN1	ORGAN2	ORGAN3	ORGAN4		ORGAN6	ORGAN7	
			ORGAN12				
ORGAN17	ORGAN18	ORGAN19		ORGAN21	ORGAN22	ORGAN23	
INORG1	INORG2						
MISC1			MISC4	MISC5			

LEGEND: IF LISTED, THEN PRESENT IN WASTE. IF NOT LISTED, THEN ITEM NOT PRESENT, NOT KNOWN IF PRESENT OR DATA

7/13/70

THE ROLE OF THE DU PONT PLANT, LINDEN, N.J. IN ENVIRONMENTAL CONTROL

I. DU PONT COMPANY POLICY

Samuel Lenher, Vice-President of the Du Pont Company has stated our company policy quite simply:

> "Our policy is simple - Du Pont will do whatever is necessary to meet or exceed all standards for clean air or water wherever we operate. It has been our intention through the years to be responsible corporate citizens and we will continue to act that way."

II. DU PONT'S HISTORIC CONCERN

A. Environmental control work within the Company began on a plant-by-plant basis in the mid-1930's.

B. In 1938, Du Pont's Executive Committee requested that all Departments exhibit the same amount of consideration for environmental control as we do for industrial safety - the latter synonymous with Du Pont.

C. Since 1938, no new facilities or expansions have been authorized unless they meet the latest standards and regulations for environmental control.

D. In 1969, Du Pont's total investment in environmental control totaled upwards of $145 million.

E. Currently more than 1000 persons are assigned to the technical aspects of environmental control.

III. DU PONT'S DEVELOPMENTS FOR ENVIRONMENTAL CONTROL

A. Scrubbers which fit into smokestacks and eliminate noxious mists and odors.

B. A new type of incinerator which has been widely adopted by other industries as well as by towns and municipalities across the country.

C. Instruments to detect and to control the release of the most minute amounts of gases and odors.

D. A thermal exhaust manifold reactor to reduce automobile exhaust fumes.

IV. THE ROLE OF OUR PLANT AT LINDEN, NEW JERSEY IN ENVIRONMENTAL CONTROL

A. Location of Plant

The plant is located:

- 12 miles from the tip of Manhattan
- 1/4 mile from Staten Island
- 1/2 mile from New Jersey Turnpike
- about a mile from nearest home
- along the Arthur Kill - a tidal strait which connects the western end of Raritan Bay estuary with Newark and Upper Bays.

ATTACHMENT D

IV. THE ROLE OF OUR PLANT AT LINDEN, N.J., IN ENVIRONMENTAL CONTROL (Cont'd)

B. Plant History

1. Plant site developed by Standard Chemical Company in 1800's.

2. 1885 - Plant sold to Grasselli Chemical Company - 3 products.

3. 1928 - Became Grasselli plant of the Du Pont Company.

4. Now comprises 18 separate and distinct chemical operations, with 52 different basic chemical products, all of which are raw materials for other manufacturers. The four principal products are sulfuric acid, sodium silicate, strontium nitrate and chlorosulfonic acid. They are used by other companies in making consumer products such as pharmaceuticals, hair shampoos, deodorants, cardboard boxes, newsprint, and railroad and truck red safety flares.

5. Present plant employment is approximately 500. Our employees live in Northern New Jersey communities and on Staten Island. About 40% live in the Linden area.

C. Environmental Control Organization of Plant

1. A chemical engineer spends full time on environmental problems. He is assisted by several other engineers who spend time in this area equivalent to 3.0 full time engineers.

2. A plant-wide environmental committee is active through regular meetings and through individual projects.

3. Employees at all levels are involved in process control and operation designed to avoid environmental problems.

4. The Du Pont Central Engineering staff in Wilmington provides expert technical assistance. A dozen specialists are available.

D. New Construction at Plant

1. Formaldehyde plant and "Ludox" colloidal silica plant now under construction have been designed to meet all standards for clean air and water. We anticipate no environmental problems with either one of these new units.

E. Our Plant Operates Under 6 Governmental Agencies' Jurisdiction (Regulatory & Enforcement)

- Federal Water Quality Administration (FWQA)
- U.S. Army, Corps of Engineers
- U.S. Coast Guard
- Interstate Sanitation Commission (ISC)
- New Jersey State Department of Environmental Protection
- Linden Board of Health (Henry Gavan, Health Officer)

We work closely with all these federal, state and local governmental agencies to meet all standards. We are - and will continue to be - in compliance with all regulations.

IV. THE ROLE OF OUR PLANT AT LINDEN, N.J., IN ENVIRONMENTAL CONTROL (Cont'd)

F. Environmental Control Facilities in Our Plant - Present & Future

Present

- Investment in plant environmental control facilities totals approximately $1 million.
- Equipment includes many mist collectors, fume scrubbers, absorbers, dust collectors, neutralization systems and retention ponds.
- The most modern instrumentation and analyzers are used to monitor our processes.
- We monitor and control sulfur dioxide emitting stacks.
- We consume low sulfur fuel.
- We have reduced our Biochemical Oxygen Demand (BOD) load to the Arthur Kill > 80% since 1968 by barging to sea.
- We have pH monitors and alarms on effluents.
- We have continuous temperature recording to avoid thermal discharges to Arthur Kill.
- We discontinued the use of our incinerator in 1969.
- We isolate our sources of excessive noise and monitor our employees' hearing by annual audiograms.

Future

We have designed into recently approved projects:

- A burner to convert all off-gases to carbon dioxide and water. (> 98% efficiency)
- Neutralization facilities to avoid discharge of objectionable effluents.
- New facilities to eliminate a type of furnacing operation in existence here at Grasselli for over 61 years in which we have difficulty controlling gaseous emissions.
- Additional alarm and detection systems to avoid acidic effluent discharges.

We are continually studying all existing processes to further reduce wastes and/or to improve the method of disposal.